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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,114

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Yusaku Kato

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10/19/2007

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EXAMINER

KOTTER, KIP T

ART UNIT

PAPER NUMBER

3617

MAIL DATE

DELIVERY MODE

10/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,114	Applicant(s) KATO ET AL.	
	Examiner Kip Kotter	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3 January 2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because of the following informalities:
 - There is a lead line in Fig. 3B with no accompanying reference character.
 - The drawings fail to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) in Fig. 11 not mentioned in the description: **H**.
 - A reference character for the “tread side” as set forth in claims 1 and 2 should be included in the drawings.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

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- In line 4 of paragraph [0003], the phrase “on ametal core M” should be changed to – **on a metal core M** –.
- In line 18 of paragraph [0015], “steel code” should be changed to – **steel cord** –.
- In line 3 of paragraph [0020], the phrase “according to their position on core” is unclear and should be corrected.
- In lines 8 and 9 of paragraph [0020], the phrase “where are within the thickness of the wing portion in the vertical direction and the tread side portion below the thickness” is unclear and should be corrected.
- In line 2 of paragraph [0028], the phrase “further tread side” is unclear and should be corrected.
- In lines 4 and 5 of paragraph [0028], the phrase “In case the horizontal protrusion is provided to the tread side than the metal core bottom” is unclear and should be corrected.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is insufficient antecedent basis for the limitations “the tread side” and “the ends of the horizontal protrusions” in claims 1 and 2. Further, the phrase “...within a fixed length of *the ends of the horizontal protrusions ends* in a crawler width direction...” is unclear and renders the claims indefinite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 2, as best understood by Examiner, is rejected under 35 U.S.C. 102(b) as being anticipated by Katoh (U.S. Patent No. 5522655).

Katoh discloses a rubber crawler track, comprising: a rubber crawler body shaped as an endless belt made of a rubber elastic body; a layer 7 comprising a plurality of steel cords embedded in said rubber crawler body; and metal cores 1 embedded in said rubber crawler body at a fixed interval in a crawler circumferential direction as shown in Fig. 3A, each of said metal cores comprising an engaging portion 3 formed at the center in a metal core length direction; guide protrusions 2 for preventing wheel run-off; wing portions 4, said guide protrusions and said wing portions each being formed at opposite sides of the engaging portion as shown in Fig. 1A; and horizontal protrusions 5a, 5b formed on sides of the metal core in a width direction of the metal cores on at least one of opposite sides of said engaging portion within the thickness of the wing portion in the metal core vertical direction and an area on the tread side below the

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thickness as shown in Fig. 3B, said horizontal protrusions facing adjacent metal cores in the crawler circumferential direction and overlapping the horizontal protrusions of adjacent metal cores within a fixed length of the ends of the horizontal protrusions ends in a crawler width direction and in a crawler thickness direction as shown in Fig. 3A, wherein a tapered horn portion *t* is provided on an end of one of the horizontal protrusions on at least one side of each metal core metals as best shown in Fig. 2.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 1, as best understood by Examiner, is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh.

Katoh discloses all of the limitations of claim 1 except the spacing of “r” in the crawler circumferential direction between the ends of the horizontal protrusions and adjacent metal cores being expressed as $\Delta r \leq r \leq 2\Delta r$ when the rubber crawler track is horizontal.

It would have been obvious to a person having ordinary skill in the art, as a mechanical expedient, to have modified Katoh by spacing the ends of the horizontal protrusions with respect to the adjacent metal cores in the circumferential direction within the claimed range based upon the spacing of the metal cores, diameter of the sprocket, thickness of the belt and weight of the vehicle.

10. Claim 1, as best understood by Examiner, is rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu et al. (JP 06087473 A).

Muramatsu et al. discloses a rubber crawler track, comprising: a rubber crawler body shaped as an endless belt made of a rubber elastic body; a layer comprising a plurality of steel cords 41 embedded in said rubber crawler body; and metal cores A embedded in said rubber crawler body at a fixed interval in a crawler circumferential direction, each of said metal cores comprising an engaging portion 1 formed at the center in a metal core length direction; guide protrusions 4, 5 for preventing wheel run-off; wing portions 2, 3, said guide protrusions and said wing portions each being formed at opposite sides of the engaging portion as shown in Fig. 6; and horizontal protrusions 161, 162, 163, 164, 171, 172, 173, 174 formed on sides of the metal core in a width direction of the metal cores on at least one of opposite sides of said engaging

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portion within the thickness of the wing portion in the metal core vertical direction and an area on the tread side below the thickness as shown in Fig. 9, said horizontal protrusions facing adjacent metal cores in the crawler circumferential direction and overlapping the horizontal protrusions of adjacent metal cores within a fixed length of the ends of the horizontal protrusions ends in a crawler width direction and in a crawler thickness direction as shown in Figs. 6 and 9.

Muramatsu et al., however, fails to expressly disclose the spacing of "r" in the crawler circumferential direction between the ends of the horizontal protrusions and adjacent metal cores being expressed as $\Delta r \leq r \leq 2\Delta r$ when the rubber crawler track is horizontal.

It would have been obvious to a person having ordinary skill in the art, as a mechanical expedient, to have modified Muramatsu et al. by spacing the ends of the horizontal protrusions with respect to the adjacent metal cores in the circumferential direction within the claimed range based upon the spacing of the metal cores, diameter of the sprocket, thickness of the belt and weight of the vehicle.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references show other rubber crawler track assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kip Kotter whose telephone number is (571) 272-7953. The examiner can normally be reached on 9:00-4:00pm est.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KTK

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RUSSELL D. STORMER
PRIMARY EXAMINER 12/14/07